System Design: Level-1

Class 1:
Important Keywords:

1. Latency
2. OSI Model
3. Why OSI model is required?
4. RTT IPC
5. NIC
6. MAC
7. TCP
8. UDP
9. Bandwidth
10. Throughput
11. Data Transfer Rate
12. Port and Process 1-1 mapping
13. Ring Buffer
14. Data transfer parameters: source port, source IP, destination port, destination IP
15. TCP Handshaking
16. Difference between TCP, HTTP, HTTPS
17. Conntrack
18. Kernel space
19. User space
20. Router
21. Switch
22. NAT
23. DHCP
24. Routing Table
25. Kernel port limit
26. Stateless and stateful

Class 2:

1. Cloud
2. Net gateway
3. Virtualization
4. NIC
5. User Space
6. Kernel Space
7. Virtual Box
8. CPU Over provision
9. RAM intensive, Process Intensive

10. Virtual switch, Linux Bridge
11. Virtual Ethernet cable
12. Source natting

Class 03:

1. Deployment of a data center/cloud platform.
2. Routing table
3. Interface
4. Gateway
5. Longest Prefix Algorithm (Trie data structure)
6. Router, switch, interface
7. BGP
8. Router connecting scalability problem (Traveling salesman problem)
9. Autonomous system
10. Redundant peers between AS
11. VxLan (RFC)
12. Overlay
13. Underlay
14. VNI
15. VTEP
16. AWS load balancer.
17. Load Balancer work steps
18. Flannel architecture of kubernetes

Class 4:

1. VxLAN packet
2. Simple cloud architecture
3. Tunnel within VTep
4. Controller
5. Leaf spine architecture
6. NAT
7. Subnet
8. DHCP server
9. Multi tenancy
10. Open VSwitch
11. VMI
12. VN
13. VNID
14. VPC
15. Virtual Router

16. VNET
17. Firewall
18. Security group
19. Webserver
20. Webserver process
21. NGINX
22. Proxy, Reverse Proxy
23. 3 way TCP handshake
24. HTTP verb (GET, POST, DELETE, PUT, UPDATE etc.)
25. Vertical scaling
26. Horizontal scaling
27. Load Balancer
28. QPS
29. Master and Slave
30. Stateful application

Class 5:

1. Vpc
2. Subnetting
3. DNS
4. TCP, UDP
5. Ngnix
6. Layer 7 routing
7. Loop back interface
8. Etho interface
9. Host base routing
10. Object storage
11. Single point failure
12. Incremental design
13. Vertical Scale
14. Multiregional Deployment
15. Peering
16. Latency
17. Database Consistency
18. Statefull Application
19. Natting
20. TTL/Time to live/caching time
21. Name server
22. Static IP
23. Read heavy request
24. Master-Slave architecture
25. Synchronous,Asynchronous,Semi asynchronous
26. Connection Pooling

27. Rolling update
28. Anycast
29. Log sequence number/Bin log coordination number
30. Multithreaded
31. Kubernetes